



# UNITED STATES PATENT AND TRADEMARK OFFICE

*ca*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/569,511      02/27/2006      Masayuki Tsuchiya      0607      7934

2119      7590      01/29/2008  
RONALD E. GREIGG  
GREIGG & GREIGG P.L.L.C.  
1423 POWHATAN STREET, UNIT ONE  
ALEXANDRIA, VA 22314

EXAMINER
----------

LIN, KUANG Y

ART UNIT	PAPER NUMBER
----------	--------------

1793

MAIL DATE	DELIVERY MODE
-----------	---------------

01/29/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/569,511

**Applicant(s)**

TSUCHIYA ET AL.

**Examiner**

Kuang Y. Lin

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,053,997 to Nakamura et al. and further in view of US 6,904,951 to Murayama et al.

Nakamura et al. substantially show the invention as claimed except that they do not show to provide a projection portion formed around the gate hole. However, Murayama et al. show to provide a projection 41 formed all around the gate hole facing the injection path for removing the oxide skin. It would have been obvious to further provide the gate 7 of Nakamura et al. with the projection 41 of Murayama et al. in view of the advantage.

4. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3-221,253.

JP '253 substantially shows the invention as claimed except that it uses copper foil, aluminum foil, or other kind of metallic foil for covering the aluminum alloy (see, for example, upper left col. line 1+ and upper right col. of page 352, line 7+, page 353, upper left col. line 6+ and lower left col. line 16+, and figures 1 and 6). However, the type of foil used depends on the alloy to be covered and would have been obvious to those of ordinary skill in the casting art to select an appropriate type of foil through routine experimentation.

5. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3-221,253 as applied to claim 6 above, and further in view of US 6,904,951 to Murayama et al.

Murayama et al. show to provide a projection 41 formed all around the gate hole facing the injection path for removing the oxide skin. It would have been obvious to further provide JP '253 with the gate having the projection 41 of Murayama et al. in view of the advantage.

6. Claims 7 and 9 are also rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3-221,253 as applied to claim 6 above, and further in view of US 6,053,997 to Nakamura et al. and US 6,904,951 to Murayama et al.

Murayama et al. show to provide a projection 41 formed all around the gate hole facing the injection path for removing the oxide skin. It would have been obvious

to further provide JP '253 with the gate 7 of Nakamura et al. and having the projection 41 of Murayama et al. in view of the advantage.

7. Applicant's arguments filed Jan. 4, 2008 have been fully considered but they are not persuasive.

- a. Applicant in page 4, last para. through page 5, 1<sup>st</sup> para. of the response stated that claim 4 required that the projecting portion 52 includes a wide, flat surface portion which begins at the edge of the gate hole 51, while Murayama et al. teaches a back up unit 7 and a blade unit 4 having a scraper edge 41. The scraper edge 41 has a thin, tapering profile set back of spaced from the edge of the gate hole. However, the function of blade unit 41 of Murayama et al. is same as the projection 52 of the instant apparatus. Thus, to provide a projection includes a wide flat surface in lieu of scraper edge presents no novel or unexpected result and would have been obvious to those of ordinary skill in the rheocasting art. *In re Kuhle*, 188 USPQ 7.
- b. Applicant in page 6, 1<sup>st</sup> para. of the response stated that claim 4, requires that the gate is taken out together with the casting after the injection casting operation is completed. It is noted that in figures 1 and 3 of Nakamura et al. the arrangement of gate plate 7 is similar, if not the same, as that of gate plate 50 of the instant apparatus. It is expected that the gate plate 7 of Nakamura et al. is capable of being taken out together with the casting after the injection casting operation is completed or it would

have been obvious to design of gate plate 7 in such an arrangement that it could be taken out with the casting should the gate plate is made of a disposable material.

- c. Applicant in page 6, last para. of the response stated that according the instant disclosure the word "circumference" does not include the end faces of the billet. However, the broad meaning of "circumference" does not exclude the end faces of the billet.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 571-272-1179. The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan J. Johnson can be reached on 571-272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:  
10/569,511  
Art Unit: 1793

Page 6

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kuang Y. Lin/  
Primary Examiner  
Art Unit 1725

1-23-08